

• Energy Levels and Orbitals:



- There are four sub-orbitals that may be in an energy level:

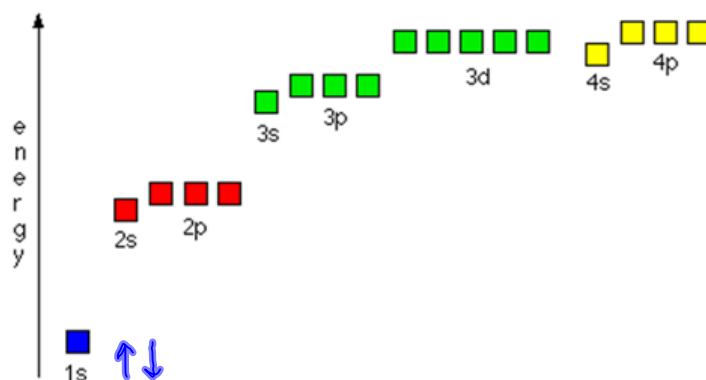
s → holds maximum 2 electrons

p → holds maximum 6 electrons

d → holds maximum 10 electrons

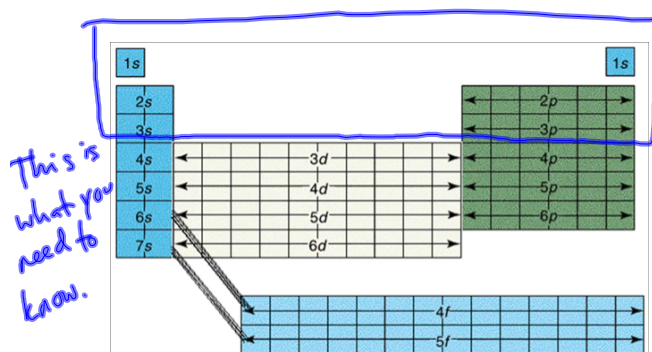
f → holds maximum 14 electrons

This chart will be on the test



• Electron Configuration:

- Way to identify where the electrons are in an energy level and sub-orbital



$1s^2$ → number of electrons
 $1s$ → sub-orbital
 1 → energy level

This is the way we write electron configurations

H: $1s^1$

He: $1s^2$

Li: $1s^2 2s^1$

Be: $1s^2 2s^2$

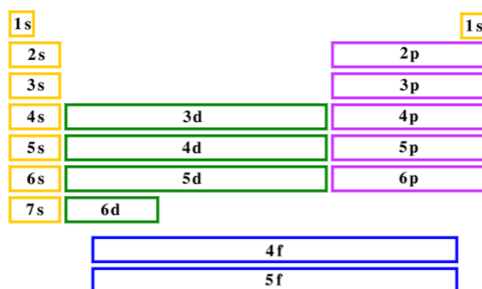
B: $1s^2 2s^2 2p^1$

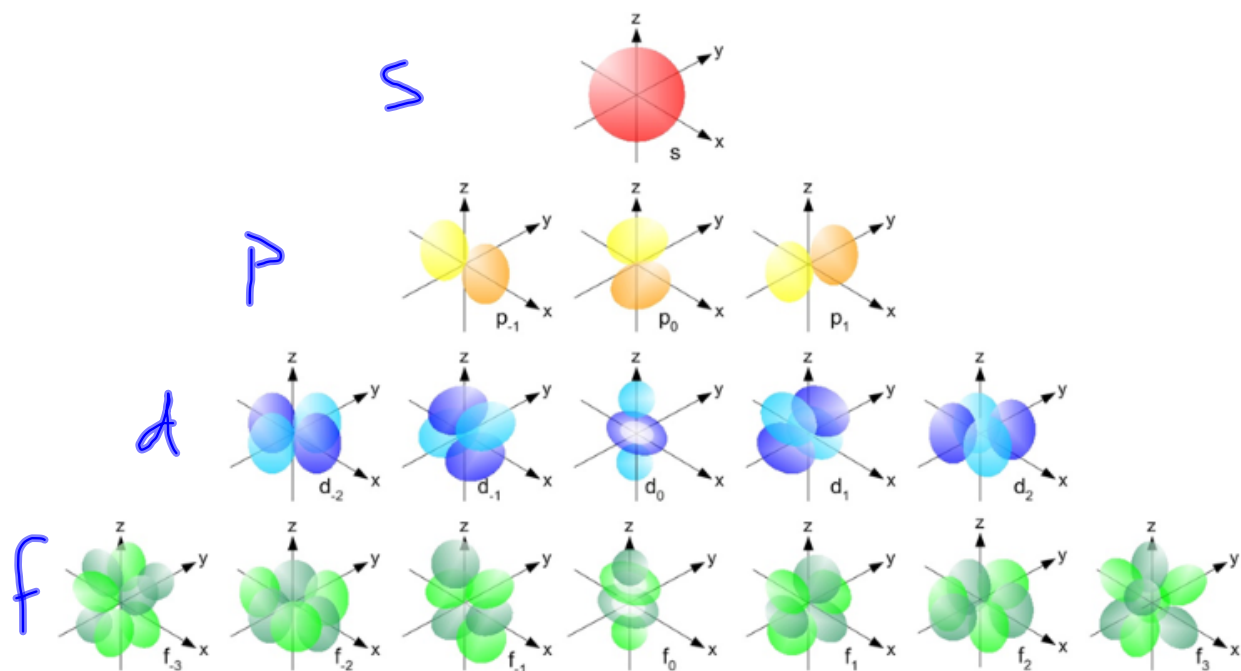
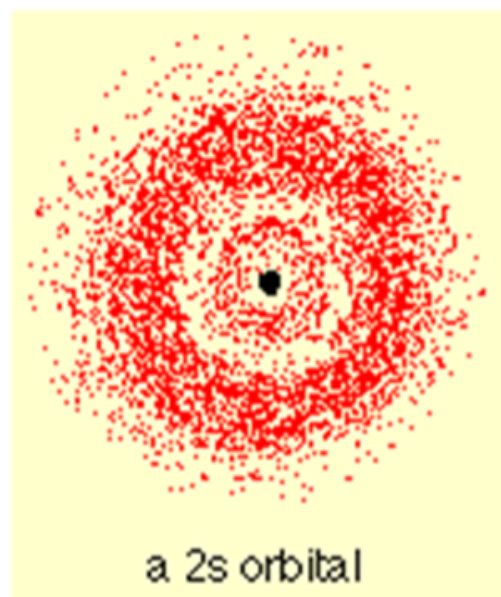
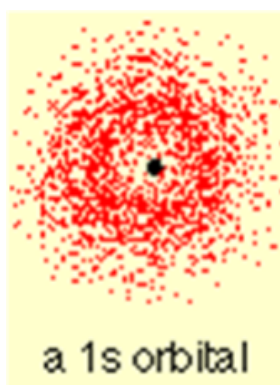
C: $1s^2 2s^2 2p^2$

Ne: $1s^2 2s^2 2p^6$

Ar: $1s^2 2s^2 2p^6 3s^2 3p^6$

Si: $1s^2 2s^2 2p^6 3s^2 3p^2$





- Orbital Diagrams:

- We use boxes and arrows to show location of the electrons



Put 1 electron in each box first



Each box only holds 2 arrows → 1 up and 1 down